



US009408706B2

(12) **United States Patent**
Hassler et al.

(10) **Patent No.:** **US 9,408,706 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **TRAPEZIOMETACARPAL JOINT IMPLANT
AND ASSOCIATED METHODS**

USPC 623/21.15
See application file for complete search history.

(75) Inventors: **Michel Hassler**, Saint Ismier (FR);
Philippe Bellemere, Nantes (FR)

(56) **References Cited**

(73) Assignee: **Tornier**, Montbonnot Saint Martin (FR)

U.S. PATENT DOCUMENTS

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 700 days.

4,759,766 A * 7/1988 Buettner-Janz et al. ... 623/17.15
4,936,860 A * 6/1990 Swanson 623/21.14

(Continued)

FOREIGN PATENT DOCUMENTS

(21) Appl. No.: **12/819,390**

DE 101 30 796 1/2003
EP 1 508 316 2/2005

(22) Filed: **Jun. 21, 2010**

(Continued)

(65) **Prior Publication Data**

US 2010/0324694 A1 Dec. 23, 2010

OTHER PUBLICATIONS

(30) **Foreign Application Priority Data**

European Search Report issued in EP Application No. 10166447,
dated Oct. 25, 2010, 4 pages.

Jun. 19, 2009 (FR) 09 54190

(Continued)

(51) **Int. Cl.**

A61F 2/42 (2006.01)

A61F 2/30 (2006.01)

Primary Examiner — Bruce E Snow

Assistant Examiner — Melissa Hoban

(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson &
Bear, LLP

(52) **U.S. Cl.**

CPC **A61F 2/4241** (2013.01); **A61F 2002/302**
(2013.01); **A61F 2002/30153** (2013.01); **A61F**
2002/30205 (2013.01); **A61F 2002/30224**
(2013.01); **A61F 2002/30301** (2013.01); **A61F**
2002/30616 (2013.01); **A61F 2002/30754**
(2013.01); **A61F 2002/4258** (2013.01); **A61F**
2230/0019 (2013.01); **A61F 2230/0065**
(2013.01); **A61F 2230/0067** (2013.01); **A61F**
2230/0069 (2013.01); **A61F 2230/0095**
(2013.01); **A61F 2310/00173** (2013.01); **A61F**
2310/00574 (2013.01)

(58) **Field of Classification Search**

CPC **A61F 2/4241**; **A61F 2002/4251**; **A61F**
2002/4258; **A61F 2/3872**; **A61F 2002/30754**;
A61F 2002/30301; **A61F 2230/0065**

ABSTRACT

(57) A trapeziometacarpal joint implant includes a body defining a median plane, a metacarpal joint surface, and a trapezium joint surface. A first central region of the metacarpal joint surface is situated on an opposite side of the median plane from a second central region of the trapezium joint surface. The first and second central regions correspond to profiles of a first axial segment and a second axial segment, respectively. The first and second axial segments are one of a cylinder, a cone and a torus and are centered on a first axis and a second axis, respectively, where the first and second axes, as projected on the median plane, are substantially perpendicular to each other.

13 Claims, 5 Drawing Sheets

